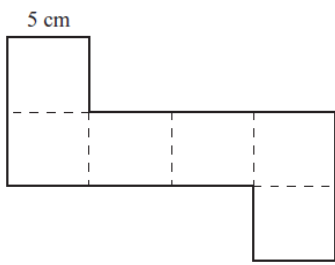
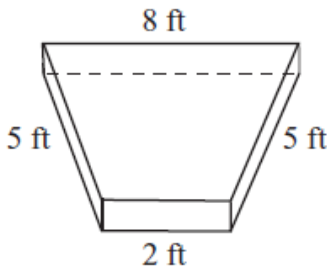
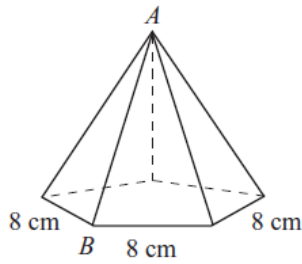


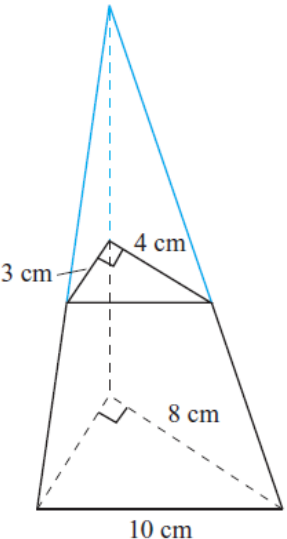
Name:


Assignment:

Chapter 8	Problem Numbers
Section 8.1	4, 6, 8, 10, 12, 26, & 28
Section 8.2	4, 6, 20, 22, & 28
Section 8.3	6, 12, 18, & 20
Section 8.4	4, 12, 14, 24, & 36
Section 8.5	14, 18, & 24

Section #	Question	Work and Answer	Instructor Comments
8.1	<p>In the figure below, line ℓ is the intersection of planes \mathcal{P}, \mathcal{Q}, and \mathcal{R}. Lines k and m are in \mathcal{P}, lines n and s are in \mathcal{R}, $m \perp \ell$, $m \perp n$, $\ell \parallel k$, and $\ell \parallel s$. Use this information to answer <i>true</i> or <i>false</i> in Exercises 1–12. Justify your answers.</p>		
	4. $\mathcal{P} \parallel \mathcal{Q}$		
	6. $m \perp \mathcal{Q}$		
	8. $\mathcal{P} \perp \mathcal{R}$		
	10. \mathcal{R} and \mathcal{Q} are oblique		
	12. $n \parallel k$		
	26. A regular dodecahedron is to be constructed using metal tubing for the edges. If each edge is to be 3 m long, how much tubing will be required for the project?		
	28. How many diagonals does a cube have?		

8.2	<p>Determine the surface area (SA) of each right prism described in Exercises 4–11.</p> <p>4. Cube with edge 5 ft.</p>		
	6. Rectangular base 2 ft by 6 ft; height 5 ft.		
	20. A pentagonal right prism has height 10 inches. Its base edges are 4, 6, 7, 8, and 10 inches. Find the prism's lateral area.		
	<p>22. If the figure was cut out and folded along the dashed lines, it would be a cube. Find the surface area and volume of the cube.</p> 		
	<p>28. Sol is building a planting bed in the shape of a trapezoid. See the figure at right. The bed will be 9 inches deep. The bases of the trapezoid are 2 ft and 8 ft and the sides are both 5 ft long. How many cubic feet of topsoil is needed to fill the bed?</p> 		
8.3	<p>In Exercises 5–18, round the answers to the nearest tenth of a unit.</p> <p>6. Find the surface area of the regular pentagonal pyramid in the figure. The apothem of the pentagon is 5.5 cm and $AB = 10$ cm.</p> 		
	12. Square base with side 30.6 ft; slant height 46.8 ft.		

	<p>18. A perfume bottle is a regular pyramid with square base. If the base has side 4 cm and slant height 3 cm, how many cubic centimeters of perfume will the bottle hold?</p>		
	<p>20. A manufacturer is designing special packaging for a product in the shape of a truncated pyramid. A truncated pyramid is a pyramid with the top cut off. The model he is building is shown in the figure with the measurements. The bases are not regular figures. The lateral sides are trapezoids. The height of each trapezoidal face is 12 cm. Determine the amount of material needed to build the model (assuming no overlap on the sides).</p> 		
<p>8.4</p>	<p>In Exercises 3–8, find the surface area of each cylinder. Round answer to tenth of a square unit.</p> <p>4. $r = 9 \text{ cm}, h = 15 \text{ cm}$</p>		
	<p>In Exercises 9–14, find the volume of each cylinder. Round to nearest tenth.</p> <p>12. $r = 4.9 \text{ m}, h = 17.8 \text{ m}$</p>		
	<p>14. $d = 28.6 \text{ in.}, h = 10.7 \text{ in.}$</p>		
	<p>In Exercises 21–26, find the volume of each cone. Round to the nearest tenth.</p> <p>24. $r = 18.5 \text{ yd}, h = 27.2 \text{ yd}$</p>		

	36. A solid aluminum cube measuring 15 inches on a side is melted and rolled into an aluminum wire that is 0.2 inches in diameter. What will be the length of this wire?		
8.5	14. A cube and a sphere each have a volume of 216 m^3 . Find the surface area of each and determine which has the larger surface area.		
	18. The mooring buoy in the figure at the right has an outer shell made of high density polyethylene. It is filled with foam so it will float. The buoy measures 12 inches in diameter. What is the surface area of the buoy? 		
	24. A chemical-storage tank is a cylinder with a hemisphere cap on each end. If the height of the cylindrical portion is 16.2 ft and the radius of the cylinder and hemispheres is 2.8 ft, how many cubic feet of a chemical will the tank hold?		

Textbook Problems/Cumulative Test Rubric

Grading is as follows. Each problem is rated on a scale of 0 to 1. The ratings are totaled then divided by the number of problems. The resulting percent is your grade out of 100 points for the assignment.

1 Correct Answer:	3/4 Mostly Correct Answer:	1/2 Incorrect Answer:	1/4 Unsupported Answer:	0 Unacceptable Answer:
Has correct answers, including units, if applicable, and supportive work.	Has a minor mistake but includes units, if applicable, and supportive work.	Has more than a minor mistake but adequate supportive work is shown	Correct answer with correct units, if applicable, but no supportive work.	Incorrect answer and no supportive work.

/24= %